

Near-surface turbulence measurements using Lagrangian floats



Eric D'Asaro, Andrey Shcherbina, and Ramsey Harcourt
Applied Physics Lab

2 floats to be deployed in September 2012:

2 x CTD + surface salinity

2 x Pressure

Solar radiation

Ambient noise spectra

Buoyancy control accurate to 1g

Iridium + GPS

Extra batteries + aggressive anti-fouling



Float mission (6-12 months)

Flexible, adaptable, synchronized with *Aquarius*

Upper-ocean profiling:

- “deep” & “shallow” CTD
- shortwave radiation profiles

Lagrangian drifts:

- profiles of vertical TKE
- tracer fluxes ($\langle w'T' \rangle$)
- dissipation rates (ε, χ)

Ambient noise spectra:

- wind & wave breaking
- rainfall

